

## ABSTRACT

In a plasma processing method and apparatus for monitoring an operating status of a plasma processing apparatus and/or a processing status of an object being processed, emission spectra emitted from a plasma is obtained as optical data when the plasma process is performed on the object. Quantitative data of each emission source is obtained from the obtained optical data by using reference data in a database storing therein emission spectra of a plurality of emission source as the reference data. The operating status of the plasma processing apparatus and/or the processing status of the object being processed is estimated based on changes in the quantitative data of each emission source.